



THOMAS G. NEWMAN,
EDITOR.

Vol. XXII. Aug. 18, 1886. No. 33.



Fifty-Two Dividends from the investment of one dollar is just what every subscriber to the AMERICAN BEE JOURNAL receives. Can any better interest be found for the investment of one hundred cents? If so, where?

Charles E. Gates, a bee-keeper of Gerry, N. Y., called a few days ago at the office of the BEE JOURNAL. He came all the way from New York on a bicycle. He was on the way to St. Paul, Minn.—looking up the country and taking notes of the crops, etc.

To Educate Consumers of Honey on the difference between the "strained" honey of commerce and pure extracted honey, is now the duty of the bee-keepers. The strained honey of commerce is obtained mostly from South America and the island of Cuba. Extracted honey is the pure nectar taken from the combs by centrifugal force, that the combs, which are of more value than the honey, may be returned to the hives to be again and again filled by the bees.

Dr. J. H. Kellogg, in his paper, *Good Health*, for August, takes back what he said about the adulteration of comb honey, as mentioned on page 443 of the BEE JOURNAL. He acknowledges that he was deceived by that lie of Prof. W. H. Wiley. If it was intended as a "scientific pleasantry," it is not very pleasant to be obliged to brand it as an unscientific lie every day. Wiley has done more harm by that falsehood than he could possibly balance with good, if he should live a thousand years.

The Editor of the AMERICAN BEE JOURNAL was on the 10th instant elected to the honorable position of "Grand Commander" of the State of Illinois, in "the American Legion of Honor," a life-insurance organization, having over sixty thousand members. This item may interest some of his apicultural friends; others will please pass it by unnoticed.

The Bees of Mount Sinai are mentioned by a correspondent of the *Leisure Hour*, I. B. Bishop, when describing a pilgrimage to Sinai. The sight was grand in the extreme, under the bright Arabian sun, with "the intense blue of the Arabian sky spreading in a clear vault of purity over the great expanse of naked mountains." Amid its awful sublimity the correspondent wrote these words: "I write from Mount Sinai. I wish I could linger here to stamp its form and surroundings indelibly on my memory." Speaking of the peak, where tradition says "the Law was given to Moses 3,500 years ago," the correspondent continues in these words:

It looks as if it had been splintered by fire, frost and earthquake, most desolate and awful.....

Barren, naked, and blasted as is this peak of sublime memories, the bees hum as gaily on it as on the thymy moorlands of Tobermory; and on the awful front of Sinai a small forget-me-not raises its fragile cup to-day as though "blackness, darkness, and tempest" had never veiled the mountain with their gloom.

As the early rose-flush gave place to day, each mountain peak, sun-kissed, turned rosy, and the red granite peaks became vermilion-colored. The splendor of the morning was nearly overwhelming, and the day has been perfect, absolutely cloudless, while the heat of the sun has been tempered by a keen north wind, which here, as elsewhere, gives a peculiar brilliancy and clearness to the atmosphere.

In the glorious sunset the mountain landscape was seen to perfection. There was a complete carnival of color. I might multiply words without conveying ideas—it was indescribable. The colors changed constantly, ran one into another, faded, deepened, intensified, flamed. There were metallic gleams on the hill sides—orange, carmine, vermilion, brown madder, green-brown, red-brown, cobalt, indigo, lilac, buff, olive-green, blue-grey, green-grey, while as the sun declined and the shadows lengthened the ravines became filled up with red-purple, changing into violet-blue atmosphere, which faded into a tender grey, while the sky took to itself manifold tints of pink, green, red, and orange, the green brightened by delicate lines of pure vermilion.

The editor of the BEE JOURNAL can imagine something like the sublimity of Mount Sinai, when contemplating the views he obtained in company with Mons. and Madam Bertrand, in Switzerland, of that grand old mountain of light—Mount Blanc—which, at sunset, constantly changed color, the hues ever blending into each other; and also when viewing the eternally snow-capped mountains in the glacier region of the Alps. There, too, on the sides of the mountains are millions of honey-bees. One of the apiaries of Mons. Bertrand (our friend and brother editor who publishes the *Bulletin d'Apiculture* at Nyon, Switzerland) is located on the side of a mountain in the Alpine region.

If bees are not fond of magnificent scenery, certain it is that they are found in many of the grandest portions of the earth.

J. E. Pond, Jr., writes us that he has lost his father, and as we know that his many friends will sympathize with him, we will quote this from his letter:

I have just lost a dearly loved father, who was buried on Saturday last. The house is lonely now. No one can tell how much a father is missed till the loss comes; and in my case the loss is the greater from the fact that he has lived with me for 25 years. He was almost 78 years of age, and a "full shock ripe for the harvest."

Local Markets for Honey is what the BEE JOURNAL has been advocating for years, and believes it to be the only solution of the question of marketing the crop and keeping the prices up. Had our advice been followed, the present low prices would not have been reached. A correspondent writes as follows:

I notice that great stress is placed upon creating local honey markets, by scattering the Leaflets, "Why Eat Honey?" I have been trying this plan, and find that it will greatly help to sell in a home market. If apiarists would give this subject more attention, instead of rushing the honey to city markets, it would be better for both the producer and consumer.

There can be no doubt about the efficacy of this method of educating the public concerning the use of honey, and we believe that if there were a judicious distribution of the Leaflets, entitled, "Why Eat Honey?" one crop would all be sold before another crop is produced.

Another point of vital importance is the fact that more than double the price can easily be obtained in the local market (when we consider the cost of barrels, transportation, commissions and leakage), than that price which can be obtained in quantity in the wholesale markets.

There are many methods of advertising honey for sale, which will be found to pay well. A sign at or near the residence or apiary with "Honey for Sale" in large letters, will be a valuable help. A few lines in the local paper, announcing the fact, will be valuable. Scattering "Leaflets" or "Honey as Food and Medicine," with the producer's card printed on them, will sell tons of honey in almost any locality. Just try it!

We have Received some samples of comb foundation which it is claimed are new inventions. Two samples are "thin foundation," made from bleached wax, which has proved decidedly objectionable to the bees in past years, the aroma and pliability of the wax having been lost in bleaching. Some of the first sent out by Mr. Hoge, being of bleached wax, caused its condemnation by several bee-keepers who tried it at that early day.

In another sample coarse cloth is dipped in melted wax, the cloth forming the "mid-rib," as the English apiarists call it, and is in fact the base of the cells. Still another is made on very coarse cloth, the threads being $\frac{1}{4}$ of an inch or more apart. These are both very objectionable, because the bees will very often amuse themselves by removing the threads, and thus "spoil the fun" of those who put the threads there.

We cannot see where the claims for "improvement" or "new invention" come in. The ideas are old, and the plans have been tried and discarded many times during the past 12 years.

Now is the Time to Join the Union.

—Let every bee-keeper send for a copy of the Annual Report and Member's Blank—fill it up, and become a member. It is to the interest of every one to do so. The dues are only 25 cents a year; and it is intended only to call for one assessment (of \$1.00) each year. Send to this office for the Report and Membership Blank.



AND

Replies by Prominent Apiarists.

[It is useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—Ed.]

Priority Right of Location.

Query, No. 292.—Mr. A started an apiary 15 years ago. Two years afterward an agricultural association established a location for candy stands within 40 rods of the apiary; then 3 years ago they established horse-stalls opposite the fence where the bees were, and within 40 feet of the apiary. Would not the previous establishment of an apiary take precedence as a business location, with a sign, "Apiary of Italian Bees," put up at the time of locating the same; establishing the fact that the association knew well they were locating their grounds and stalls close to an apiary?—P., Wis.

I hardly think so.—G. M. DOOLITTLE.

Experience in bee-keeping will hardly help one to answer this. One good lawyer ought to tell more about it than ten bee-keepers.—C. C. MILLER.

I think you are correct. But if you were to take the matter into court it would depend on how good a lawyer you could get on your side.—H. D. CUTTING.

I should vote "aye," and in addition I would say that anything that Mr. A can do within the bounds of reason, to prevent his bees from annoying the horses and candy-makers, should be done.—W. Z. HUTCHINSON.

Not at all. Bee-keeping as yet is not so acknowledged as a business, either in law or by custom, as to allow it to become a nuisance or dangerous. Priority of occupation gives no rights in the matter.—J. E. POND, JR.

There is no law that covers such a case, so far as I know. It is a question of moral bearing, and a man on a horse will hardly see the rights of his neighbor who "fools with bees." Were I situated with my bees as you describe, I would use due care to prevent accidents and annoyances, and would firmly stand for my rights. Previous occupancy would have a strong moral bearing in favor of the bee-man.—G. W. DEMAREE.

I am not lawyer enough to decide. While Mr. A might and probably does have justice with him numerically, and doubtless financially he is

the weaker party, and sorry as we may feel about it, "it is money that makes the mare go," especially when lawyers hold the reins.—A. J. COOK.

I should say Mr. P. has an indisputable right to keep his bees where they have had priority of location. The association could protect the candy-stands with screens at no great expense, and if the bees are not molested by the apiarist at the time the stalls are in use, I do not think the horses would be stung. Horses are driven within a few feet of my apiary almost every day without ever being stung, but I keep no ugly bees.—G. L. TINKER.

I think not, provided the annoyance of the bees rests in the fact that they sting animals outside of their inclosure, to any considerable extent. It is not a question of who began business first, but no man has any right at any time to keep bees in any place where they will go off from their owner's land to sting persons or animals in defense of their homes. It is my opinion that for no other act can bees justly be declared a nuisance. But if apiculture is a legitimate business at all, the bee-keeper has a right to keep bees, whether they eat grapes or not, no matter who began producing honey or grapes first. Bees must be considered free-commoners in every thing except the use of their stings, or else we must close up business. This is where, I think, it will end.—JAMES HEDDON.

Is Late Breeding Necessary?

Query, No. 293.—Is it considered necessary to keep up late breeding by feeding during a dearth of fall pasturage, in order to insure successful wintering?—R. P., Ills.

No.—JAMES HEDDON.

No, we do not do it.—DADANT & SON.

Opinions differ. I think not.—W. Z. HUTCHINSON.

Opinions differ. I think they might be the better for the feeding.—C. C. MILLER.

Not in my locality, if the bees have stores enough for winter. Late breeding is of no advantage in my apiary.—G. W. DEMAREE.

I think not, though at times it may aid not a little.—A. J. COOK.

Not by the writer. I have failed to reap any benefit by such a procedure.—G. M. DOOLITTLE.

It may not be absolutely necessary, but I think the colonies are in a safer condition to winter with a reasonable proportion of young bees.—H. R. BOARDMAN.

No; old bees will winter as well as young ones. For several years my bees stopped breeding in September, and came through in good condition.—H. D. CUTTING.

While it may not be necessary to keep up late breeding in order for successful wintering, it is all-important for a colony, either in the North

or South, to go into winter quarters with from 20 to 30 pounds of stores, if we desire the colony to come out strong and prove profitable the next season.—J. P. H. BROWN.

Opinions differ. I am decidedly of the opinion myself that it is necessary; others seem to think that old bees will winter as well as young ones. I prefer a full colony of young bees to go into winter quarters with.—J. E. POND, JR.

No; but they must have pollen or bee-bread to begin breeding in late winter at the usual time, about Feb. 1. In fact I know of no reason why any bees should not have bee-bread in winter as nature has provided.—G. L. TINKER.

Buckwheat for Honey.

Query, No. 294.—If a bee-keeper has one acre of buckwheat, and the season is favorable for a good flow, would it do 100 colonies much good, if they have nothing else?—Indiana.

Not much.—W. Z. HUTCHINSON.

"No."—JAMES HEDDON.

I cannot say, but I should think it might be valuable if the season was favorable.—A. J. COOK.

Not much.—G. M. DOOLITTLE.

No, though it will be better than nothing.—DADANT & SON.

One acre of buckwheat in the most favorable season would only be a drop in the bucket divided among 100 colonies of bees.—J. P. H. BROWN.

I do not think it would; 100 colonies of bees require a number of acres of the best bee-forage to make surplus. To produce a large surplus there must be hundreds of acres of white clover.—G. L. TINKER.

It might possibly keep them stimulated to constant brood-rearing, but would be of little value otherwise. Still it would be of value so far as it would go round.—J. E. POND, JR.

It would be a little help to keep them busy, but if there was nothing else you would not get any honey from the buckwheat. When it is a good season for buckwheat it is good for the blossoms of other plants.—H. D. CUTTING.

It would keep the bees busy a few hours in the morning and give them a little honey for daily consumption. I doubt if a single acre of buckwheat will yield a gallon of nectar, accessible to the bees, each day on the average, and this perhaps would represent a quart of honey—a mere taste for 100 colonies of bees. It requires a widespread supply of honey-producing flowers to give bees profitable employment.—G. W. DEMAREE.

It would do them one acre of good, and ten acres would do more good. One acre might keep up breeding if that is desired; as, according to estimates I have seen, an acre of buckwheat yields on a good day 25 pounds of honey, thus giving $\frac{1}{4}$ pound to each of 100 colonies.—C. C. MILLER.



Explanatory.—The figures BEFORE the names indicate the number of years that the person has kept bees. Those AFTER, show the number of colonies the writer had in the previous spring and fall, or fall and spring, as the time of the year may require.

This mark \odot indicates that the apiarist is located near the center of the State named; δ north of the center; γ south; \circ east; \bullet west; and this \nearrow northeast; \nwarrow northwest; \searrow southeast; and \swarrow southwest of the center of the State mentioned.

For the American Bee Journal.

Teasel—Its History and Value.

G. M. DOOLITTLE.

From the numerous letters I am getting each mail relative to teasel and its cultivation, I judge I cannot please the readers of the BEE JOURNAL better than to give an article on this subject, in which I will give all the facts regarding it, as far as I know them. There are others, like C. M. Goodspeed, of Thorn Hill, N. Y., who might tell more of the mode of cultivation than I can, and if any are expecting to go into teasel raising it would be well to write to him.

Among my first recollection of this plant aside from the wild ones growing over the greater part of the United States, was this story which was told in this locality for a fact, the truthfulness of which I have no reason to doubt:

A young Englishman came to this country and went to the house of a farmer who possessed the title to 100 acres of good land, but who owed a rich neighbor for nearly the full value of the land. This Englishman had no money, but proposed to put in 5 acres of teasels on shares on the farmer's land, and if possible work enough for the farmer to pay for his board and clothes, besides tending the teasels. He convinced the farmer that there was money in this, so the farmer an unheard-of plant; so the farmer consented. The next year he proposed to put in 10 acres more, they to hire the money to procure the needed help to harvest the first 5 acres (as it takes 2 years to grow teasels) and tend the others. The farmer reluctantly consented to the proposition, but finally trusted to the knowledge of his English friend. To make the story short, the teasels made the large yield of 300,000 per acre, and were sold for \$5 per thousand, thereby taking both from poverty and making them well-to-do in the world, the farmer paying for his farm and having money beside.

This caused a great "boom" in teasel culture here, so that teasels went down, down, till the price of 40 cents per thousand was reached. As 75 cents per thousand is about as low as teasels can be raised, and pay for

the cost of production, of course a reaction took place, which, together with their winter-killing so badly of late years, made the acreage sown very small from 1877 to 1884. However, many of the farmers raised some each year, some holding the crop for higher prices. During the fall of 1884 the price went up to \$2 per thousand, and in the spring of 1885 a large acreage was again sown throughout the teasel belt, so that while I write millions of teasel are just going out of bloom within from one to ten miles of here, the nearest piece being one mile distant, while from three miles on, is the range of flight my bees have to make to get where teasel is plentiful.

TEASEL CULTURE.

The plant is bi-ennial as a rule, although a part of the smaller plants may not produce teasels or heads till the third year. Such three-year-old plants are called "voors." The ground for teasels is prepared as for corn or potatoes, the rows being 3 to 3½ feet apart, the marks being made only one way. The seed is now sown in the marks, and, as a rule, left for the rains to wash in. The ground should be fitted as early in the spring as possible. If a little late, it is well to brush the seed in.

When the plants first come up they are very small, and the caring for them is a tedious, back-aching job, about the same as it would be to care for carrots, onions, or beets. The plants are cultivated and hoed, or should be three times. Farmers usually plant beans or turnips between the rows the first year so as to get a little something to pay expenses during the first season. Latterly, since they have winter-killed so badly, corn is planted between every third or fourth row, which is "topped," and after husking the balance of the stalks are left standing to catch the snow which is a great protection to them.

The second year, during the month of May, they are cultivated and slightly hoed, when they are left to "run," as it is termed. The largest or first heads at the top of the stalk are called "kings," and commence to bloom about a week before basswood, or from July 1 to the 10th, continuing in bloom for about a week or ten days. The first blossoms appear a little above the centre of the head, blossoming toward the tip and base, and ending off at the base. As soon as the blossoms have all fallen off they are cut with a stem about 6 inches long on each head, drawn to the barn and stored about 6 inches deep on scaffolds to cure. When cured they are put into large boxes and shipped to manufacturers for the purpose of raising "nap" on cloth. The "middlings," as they are termed, commence to blossom when the kings are about half through, and the "buttons" come last, making from 20 to 30 days of bloom, according to warm or cool weather, from the commencing of the kings to the ending of the buttons. The middlings and buttons receive the same treatment as the kings, and all are mixed and sold to-

gether, 10 pounds making a thousand.

While an extra good acre may yield from 250 to 300 thousand, there are more acres that do not yield one-third of that amount, say nothing of the hundreds of acres which winter-kill, except a small margin around the fences where the snow-drifts protect them.

TEASEL FOR HONEY.

Since my articles regarding this plant in 1876, 1877 and 1878, hundreds have written me, saying that bees do not work on teasel with them. It is evident that the "teasel with them" is the wild kind, upon which I never saw a bee at work. All the illustrations of this plant that I have ever seen, portray a head of the wild teasel, as the spines are always pictured as standing straight out, the same as they do on the wild kind, while on the tame variety, or fuller's teasel, these hundreds of spines all hook down like the upper bill of a hawk, and are almost as strong. A tame teasel head thoroughly hooked into a garment cannot be pulled off without tearing the cloth, unless the cloth is very strong. I have dwelt on this part thus at length so that all could understand.

Bees work on teasel all hours of the day, and no matter how well basswood may yield honey, a few bees will be found at work on teasel. A bee that works on teasel is readily distinguished from those at work on basswood, by the tip and upper part of the abdomen being covered with a white dust. By this means it is easy to tell what proportion of a colony is at work on this plant. Black and hybrid bees work on it in larger proportion than do the Italians. For instance, when both basswood and teasel are in full bloom, about every fourth bee in a hybrid colony will have this dust on it, while not more than one out of 12 to 16 will show it with the Italians.

The honey from teasel is very thin and white—in fact, the whitest honey I ever saw—but it is not of as good flavor as either clover or basswood. This thinness of the nectar, and its coming just when basswood does is the great drawback to it. From careful tests I should say that it would take four bee-loads of it to be equal to one bee-load of nectar as gathered from basswood, or seven loads to be equal to one load of ripened honey. Then, coming as it does with basswood, makes it of no great advantage except that it usually lasts from 6 to 10 days after basswood is gone, so it helps to finish up partly-filled sections.

Again, my bees have to fly from 2 to 10 miles to get at this thin nectar, as I am on the most southern edge of this teasel belt. According to those who believe bees only fly 1½ to 2 miles for honey, I should not get anything from teasel, but to quiet their fears I will say that I have repeatedly seen my bees flying to and from the teasel fields, from our church door, which is 2½ miles from my apiary in line with the fields.

As to about what proportion of my crop of honey has come from teasel

the past 15 years, I should say about one-tenth; some years more, and some years not a single pound. In 1877 I got the largest yield, while from 1878 to 1884 little if any was obtained.

Mr. Camp, on page 458, seems to think that I am trying to keep the matter of teasel as a honey-plant a secret; but such is not the case. I have sent out package after package of the seed to different individuals, and have written hosts of letters giving instructions how to grow it, and had supposed that all were aware of what I had written.

In conclusion let me say that I have no seed to sell, nor the time to write further on the subject, for there is in this article all I know about the plant. If any are desirous of trying teasel in their locality, I presume Mr. Goodspeed will furnish any farther instructions that they may desire.

Borodino, © N. Y.

Guelph Central Convention.

The *Guelph Mercury* of August 5, reports the proceedings of a meeting held the day previous for the purpose of organizing a bee-keepers' association. Mr. Thos. Simpson was elected chairman, and A. Gilchrist was appointed secretary, *pro tem*.

Mr. R. L. Mead spoke of the advantages to be derived from such an organization. The Rev. W. F. Clarke, R. F. Holtermann, of Brantford, and others made some remarks on the same subject. It was then moved by Mr. Clarke that a bee-keepers' association be formed, called the "Guelph Central Bee-Keepers' Association."

The following officers were then elected: President, the Rev. Wm. F. Clarke; Vice-President, J. Ramsey; Secretary-Treasurer, A. Gilchrist.

A discussion followed on the hibernation theory. R. L. Mead did not believe in the theory. He explained his method of wintering bees, with which he had been very successful. He keeps the temperature of his beehouse at 45° to 50°. J. Ramsey wished Mr. Clarke to explain his theory of hibernation, as he did not understand how bees could enter such a state.

Mr. Clarke then explained at some length his experience and views on the theory which he claimed to be the father of, until recently, when he discovered to his surprise that Prof. A. J. Cook had enunciated the theory in February, 1875.

A general discussion followed on the marketing of honey, all taking a part. The convention adjourned to Mr. James Goldie's grounds to see a new honey-plant, fifty specimens of which had been sent to Rev. W. F. Clarke in the spring for trial, by Mr. Hiram Chapman, of Versailles, N. Y., and of which Mr. Goldie had kindly taken charge. Though it was late in the afternoon, bees of all sorts and sizes were working on it very busily. It was generally agreed that, from all appearances, the bees must be getting considerable honey from the plant, but whether it was desirable or safe

to have it generally cultivated could not be determined without further knowledge of it.

Mr. Goldie's grounds and garden looked their best. The evergreens, shrubs and trees were carefully inspected, but the aviary, in which are many choice foreign birds, seemed to take the eye. All present were very much delighted with their visit. A vote of thanks was tendered Mr. Goldie for his kindness and attention. This brought to a close the first and very successful meeting of our new Association.

For the American Bee Journal.

The Chapman Honey-Plant.

N. W. McLAIN.

The committee appointed by the North American Bee-Keepers' Society to investigate the merits of a honey-producing plant now being cultivated by Mr. Hiram Chapman, of Versailles, N. Y., met at that place on July 28. One member of the committee, Mr. Manum, of Vermont, was unavoidably detained at home. Mr. Chapman exhibited a specimen of this plant and made representations concerning its value to bee-keepers at the Detroit convention in December, 1885, which led to the appointment of a committee which was instructed to investigate and report at the next annual meeting of the society.

This plant, which Dr. Beal, of the Michigan State Agricultural College, tells us is *Echinops Spherocephalus*, and native of Central France, is, by common consent, beginning to be known as the Chapman honey-plant, thus designated on account of Mr. Chapman being first to cultivate the plant in this country, and first to call the attention of those engaged in bee-keeping to its value as a honey-bearing plant.

The appearance of the plant has been well described by Mr. T. F. Bingham, on page 487, where he says: "It grows from 3 to 4½ feet high, each root or crown bearing from 6 to 16 round buds or heads, from 1 to 1½ inches in diameter. These heads all stand upright, and the entire surface is covered with small white flowers having bluish stamens." The stalks and leaves so nearly resemble those of the thistle that were it not for the head, this plant might easily be mistaken for the thistle. There is, however, in this particular, a very marked difference, the appearance of the head being aptly described by its botanical name—round headed, and in appearance like a hedge-hog.

The flowerets on the top of the head open first, then they open later along the sides, continuing in the order of nature around the entire surface of the sphere. Near to the stem the last flowerets open, after the blossoms on the top of the heads have disappeared, and the seed capsules of the first blossoms have hardened. Unlike the thistle the seeds are provided with no balloon by which they may be borne by the wind. The seed

is in weight and appearance very like a small grain of rye, is enclosed in a capsule and falls directly to the ground if not seasonably gathered, not spreading more than oats if left to fall without harvesting.

From the time of the first appearance of bloom upon the top of individual heads until the fading of the last blossoms on the lower half of the head near to the stem, is about eight days, the continuance of bloom depending upon the nature of the soil and the season; but the heads or buds sent out from each individual shoot and forming each individual cluster, vary in age and size, so that the natural term of blooming and honey-bearing may safely be reckoned at from 20 to 30 days.

The term of blooming may, however, be prolonged to a considerable extent by cutting back a portion of the plants, and the facility with which the honey harvest may thus be prolonged, constitutes an important feature when estimating the value of this plant.

The plant is hardy, easily propagated, and perennial, and appears to flourish in all kinds of soil, and there is no danger of it becoming a pest or noxious weed. It does not bloom until the second season, and as it does not spread, its extirpation would be easily accomplished. It may be planted in waste places, or it may be sown in drills or hills like onion seed. It seems to be characteristic of the plant to root out all other vegetation and take possession of the soil. No weeds and but very little grass was seen growing in the three-acre plot observed.

As to the value of the plant to the honey-producer, there appears to be no room for doubt, whether quality or quantity, or both be considered. Within reach of Mr. Chapman's apiary no other resources were accessible for honey-gathering, the severe and prolonged drouth having destroyed all other honey-yielding blossoms, and yet in some instances the bees were making an excellent showing in the hives.

The number of colonies (about 200) foraging upon the three acres in bloom was, however, so great that no definite conclusion could be reached as to the probable returns in pounds of honey from a given area. That the returns would be highly satisfactory is evidenced by the fact that the entire area was "alive with bees," and they visited the flowers from daylight until dark, and sometimes eight or ten bees were upon a single head at one time. Mr. Hubbard, who is cultivating some of these plants obtained from Mr. Chapman, reported that he had counted the number of visits made by bees to a single head from 5 a.m. to 7 p.m. He reported the number as being 2,135, actual count.

In order that the committee might have some idea of the quantity of nectar secreted in the flowerets of a single head, the day before our arrival, Mr. Chapman had wrapped a thin paper about a head, the half of which was in full bloom, and tied the paper

around the stem with tape, thus preventing the bees from appropriating the nectar for 24 hours. I cut off the tape, and removing the paper, held up the ball before Messrs. A. I. Root, L. C. Root, and others—the flowerets were dripping nectar, and the drops sparkled in the morning sun, and their eyes sparkled with delight and astonishment. I have made similar tests with like results, using the plants which I have here at this Apicultural Station.

Mr. Chapman has distributed this plant over a wide extent of country, from Vermont to Nebraska, and each member of the committee has been furnished with two-year-old plants for cultivation and observation during the present summer. All the facts obtainable will be given to those interested when the committee make their formal report to the Society at the next annual meeting.

U. S. Apicultural Station, Aurora, ♀ Ills., Aug. 5, 1886.

For the American Bee Journal.

Honor to Whom Honor is Due.

JUSTICE FAIRMAN.

I am surprised at the latter portion of Mr. Demaree's article, on page 501, wherein he condemns the double brood-chamber, and lays claim to the one-half bee-space, as he did to the double brood-chamber on page 102.

As a reason for my surprise, please allow me to quote the following, as found on page 102, where, in criticising Mr. Heddon's new hive and principles, Mr. Demaree says:

"As to the utility of a hive made in horizontal sectional parts, I am not without experience. I have experimented in that direction for the past six years, and I now have bees wintering in a hive made of cross sectional parts, only 5½ inches in depth. When the bees were prepared for winter, in September, they were shut down in a single sectional part of the hive, the frames being only 5½x17¾ inches, outside measure. I have experimented quite extensively with the sectional shallow-frame cases, using them for brood rearing, tiering them up to suit the size of the colony, and for queen-rearing, using a single sectional case; and I have employed them largely for taking extracted honey on the tiering-up plan. . . . In the discussion between my distinguished friend, Dr. Southwick and myself, published in the AMERICAN BEE JOURNAL, Vol. 19, pages 370 and 371, I mentioned my shallow-frame system, using it as an argument in favor of shallow frames."

Near the close of this criticism of Mr. Heddon's one-half bee-space, Mr. Demaree says: "It is proper to say that the frames are adjusted in the case, so as to leave a shallow bee-space both at the top and bottom of them, and the case will work with either side down or up. Comment is unnecessary."

Now imagine my surprise at reading the following on page 501:

"The idea of a shallow bee-space at the top and bottom of the frames and section-boxes originated with myself, though I notice that this idea is prominent in Mr. J. M. Shuck's patent hive, a sample of which I have in my apiary; but I suppose that Mr. Shuck does not claim this as his property, as it would be impossible to define what a 'bee-space' is, in actual measurement."

"After trying the double-brood-chamber hive pretty thoroughly, I feel sure that it will never come into general use. Those who wish to manipulate all the honey out of the brood-nest into the surplus department, with the view of feeding cheaper food than honey to their bees for winter stores, and have no qualms of conscience if some of the 'cheaper food' does go into the surplus at the beginning of the early honey harvest, will probably hold on to the tiered brood-chamber for some time to come, or until the honey business is well nigh ruined."

This does not seem to harmonize with Mr. Demaree's criticisms as cited from page 102. Allow me to quote from Mr. Hutchinson's article on page 152. Speaking of Mr. Heddon's new hive in reply to Mr. Demaree, on page 102, he says: "There can be no imaginary question as to the newness of thus arranging frames so as to have the bee-space on either side, or divided between both, at will."

Here allow me to quote from Mr. Heddon's book, page 123: "The term 'bee-space' does not only denote a space that will admit of the passage of a bee, but it refers to that space in which bees are least inclined to build brace-combs or place propolis, or bee-glue; which is a scant ⅜ of an inch."

On page 214, Mr. Heddon lays down six of the claims of his late invention. No. 2 reads as follows: "Arranging frames within a case which is bee-space deeper than the frames, in such manner as to leave one-half of that bee-space on either side of the frames."

We also find it clearly described on page 91 of his book. If Mr. D. has read that book, I do not see what prompts him to mention Mr. Shuck, and ignore the one who first made it public, and I believe first invented it. I am not talking about patents, but about respectfully and honestly giving "honor to whom honor is due;" and here allow me to quote from Mr. Heddon, from page 53 of the AMERICAN BEE JOURNAL for 1885, wherein he is discussing the question of the moral rights of inventors. He says:

"Let the prior inventor remember that such priority is not enough for a claim of right." We have no money or time to spend settling complicated claims of secreted priority. The first man who benefits us all by publishing, thus giving to us the advantages of his invention, let us hold entitled to all the honorary and financial benefits accruing from such discovery, and the exclusive right of manufacture of the same for a reasonable length of time."

The above strikes me as being in harmony with reason and justice, and precludes the wrongs that might be perpetrated through falsehood. Upon referring to Mr. Demaree's cited controversy with Dr. Southwick, I find that his shallow sections were all surplus sections, and that the brood-apartments used by him are plainly described as one story, and of Langstroth depth. I have used Mr. Heddon's divisible brood-chamber, and I consider it of immense value, and firmly believe that the same conclusions will be formed by others who are testing it. Let us see, when they report.

Louisville, ♀ Ky.

For the American Bee Journal.

Having an Ax to Grind, etc.

C. W. DAYTON, (200).

On page 409 Mr. Heddon says that he does not see why I should acknowledge any such motive as having an "ax to grind," when I described the "queen-restrictor," on page 393, unless I wrote for the purpose of extolling the merits of the manufacture with a pecuniary end in view. I think that I did not acknowledge such motives, but suggested that some might acknowledge it for me; but in that it might be possible that I judged too strongly. I gave the "ax to grind" statement from a remembrance of its having been employed to show that the description of fixtures described were not for advertisement; and as such action would be stealing advertising space, and very discreditable, I asked if there would necessarily be discredit connected therewith, if I wrote because I had an "ax to grind;" as I believed that it might be for the purpose of gaining glory, or what would appear better in the public press, mutual benefit.

As Mr. Heddon cannot see (from his stand-point) my arrangement as at all practical, etc., I thought of predicting in my former article, presuming such stand-points to be on the roof if not behind a sectional hive, to which hives my arrangement cannot be adapted. Doubtless he has formed connubial relations with the idea that the revolutionizing of bee-keeping must incur a full change of hives and contents instead of the simple arrangement of a few ordinary frames.

It is my opinion that the sections should be where the bees wish to put the honey, instead of shutting them up (from the queen) in an out of the way place, and then attempting to drive the bees into them. On the whole, it is much like the stock laws in some sections of our country, where \$100 worth of fencing is used to confine \$10 worth of stock in the highway; while \$10 worth of pasture fence would restrict \$100 worth of stock, and save an immense amount of labor and care.

Bradford, ♀ Iowa.

For the American Bee Journal.

The Iowa State Convention, etc.

O. CLUTE.

President Poppleton, of the Iowa State Bee-Keepers' Association, has issued a call for the annual meeting of the Iowa Association on the Fair Grounds, in Des Moines, on Tuesday, Sept. 7, at 2 p.m. The association, in accordance with a plan suggested several years ago, has procured a large tent which will be put up on the Fair Ground, and will be used for the meetings, for the head-quarters of the President and Secretary of the association, and for the convenience of bee-keepers generally.

All Iowa bee-keepers should make an effort to be present at this meeting. Matters of importance to all will be discussed. Come prepared to state your experiences. Tell us where you have succeeded, and on what your success was based. Tell where you have failed, and what were the causes of your failure.

These meetings are open not only to the bee-keepers of Iowa—bee-keepers from all parts of the world are welcome. All are heartily invited. It is probable that some of the bee-men can bring blankets with them, and find a place to lodge in the tent.

The Iowa State Fair is in progress from Sept. 3 to the 10th. For many years this Fair has been a very large and important one. This year the Society has new grounds and new buildings, all arranged and built in accordance with the suggestions of those who have had much experience in Fairs. It is believed that when the grounds and buildings are all complete they will be equal to anything, for the same purpose, in the world. The new grounds and buildings are giving such an impulse to all classes of exhibitors throughout the West, that it seems probable the exhibit in all departments this year will be even better than in years just passed. It will richly repay a visit.

This has been a good year for bees, in spite of the dry weather. The honey crop is large in quantity, and of very superior quality. The bee-keepers of Iowa and adjacent States should see to it that a very large and instructive exhibit of bees, honey, and implements is made. The State Agricultural Society has offered generous premiums in the bee-department, which are open to competition from the whole world. Come, all of you, and bring your exhibits along.

The Inter-State Bee-Keepers' Association meets at St. Joseph, Mo., on Sept. 1. This is the week of the St. Joseph Exposition, which has become famous for its size and excellence. It also gives generous premiums in the department of bees and honey, and the exhibit in this department has been for several years a good one. Bee-keepers everywhere should bear in mind this exhibit, and make a display at it. And they should not fail to attend the meetings of the Inter-State Bee-Keepers' Association.

Parties desiring to see the list of premiums offered in the department of bees and honey at the Iowa State Fair, can get a copy of the premium list by addressing Hon. J. R. Shaffer, Secretary of the State Agricultural Society, Des Moines, Iowa. Those wanting the St. Joseph list of premiums can get it by addressing E. T. Abbot, Secretary of the Inter-State Bee-Keepers' Association, St. Joseph, Mo.

Iowa City, Iowa.

For the American Bee Journal.

Bee-Keeping in Cuba, etc.

A. W. OSBURN.

It affords me much pleasure to read the reports of a bountiful honey crop nearly throughout the United States, for the efforts of the bee-keeper is none too well paid at best. With us the outlook is not so bright. For the last three months we have been feeding our bees, and shall have to continue to feed for at least three and one-half months longer. The good reports that have been made from time to time from this Island have been the aggregate amount of honey from the country, not from any one apiary or locality, which, in the poorest season, would make quite a respectable showing, for the reason that it seldom happens that the eastern end of the Island fails to produce a tolerably fair crop of honey, as in that locality are large tracts of woodland, swamps, low lands, creeks and rivers, and this is where the bulk of the bees of Cuba are kept. There is more rain there than in the western end of the Island. Then these forests and swamps (some of them at least) are little more than a matted mass of bell-flower vines, which is the best honey plant of Cuba.

Again, these low lands are in the interior, removed from the influence of the coast winds that sweep along the country near the ocean in the winter months, making the secretion of honey an impossibility, for several days at a time. Yet it is not so hard for an American to choose between these two localities, the one near to Havana and the coast, or removed from both. In the former he has protection of life and property, and the chance of securing an average crop of honey (or what would be called an average crop for most countries); while in the latter, with the almost positive assurance of a big yield of honey, he is removed from the protection that the country near Havana affords; compelled to live in a very thinly settled country, away from society, a long ways from shipping points, with transportation to and from his apiary the most difficult, owing, in the main, to the bad roads, which, in Cuba in the rainy season, are almost impassable, and then only by an ox-cart, with from 2 to 4 yoke of oxen on a cart to draw 2 casks of honey.

We are located 10 or 12 miles west of Havana, on as good a road as Illi-

nois or New York can produce; and in a thickly settled country, free from all the annoyances of life in the interior of Cuba.

I send a hearty welcome to the new members of the National Bee-Keepers' Union, and a word of encouragement to the old ones, that they may never flag in their efforts and determination to protect the rights of beekeepers.

Cuba, W. I.

For the American Bee Journal.

Feeding Sugar to Bees.

W. Z. HUTCHINSON.

What grand, good times we do have in the columns of the "old reliable" AMERICAN BEE JOURNAL! How I do enjoy these apicultural discussions; especially when so conducted that, when the battle is over, each combatant stands higher in the estimation of his opponent. This "sugar feeding" controversy promises to be of that character. I shall try to be fair and courteous, and I think that my opponents will be.

Although probably unintentional on the part of Mr. Wright (page 472), I think that his quotation from my letter on page 411, does not fairly represent the meaning that I intended to convey. He says: "Mr. Hutchinson claims that when bees are undisturbed by man's reason, they meet an untimely fate." Beg pardon, Mr. W., I did not make such a claim. I said, in substance, that the opposing of sugar feeding upon the grounds that it was "against nature" was ridiculous; then I said (now let me give the whole sentence from which Mr. W. quoted): "Did bees never perish when left to their own sweet will in all things, this argument would be more forcible; but when undisturbed by man's reason, the bees meet an untimely fate, it is evident that nature has made a mistake somewhere." (I have italicized the part that Mr. W. attempted to quote.) Does not Mr. W. see that I did not claim broadly that "when bees are undisturbed by man's reason, they meet an untimely fate?"

The point is just this: We have been repeatedly informed that honey and pollen is the natural food of bees; it is "according to nature" that they should live and thrive under its consumption; that it was the height of folly to say that death lurked in nature's food. Some bee-keepers very foolishly (?) neglect to clip the wings of their queens, and, as a consequence, a swarm occasionally hies away to a forest home of its own choosing—to a home furnished by nature—it stores natural food and leads a natural life until—it dies of diarrhea during some "disastrous winter." Nature made a mistake. Is it any more inconsistent to say that the mistake lay in the food she furnished, than that it lay in some of her other furnishings?

Mr. Hill asks: "Who has fed cane-sugar since the foundation of the world in order to keep the race

extant?" Honey differs in character. Seasons vary. Localities are not all similar. The world is large. It seems there has always been enough good honey, or good something, somewhere in the world, so that bees enough for seed have always been left. Apiarists are endeavoring to ascertain under exactly what conditions bees will always winter successfully. We can put bees in a repository and keep the temperature at any desired point. We can do this year after year. If moisture and ventilation have any bearing upon the problem, these can be controlled. I think that few, if any, dispute that food is a factor in the problem. The food cannot be unvarying in character, in all instances, if we "follow nature."

Mr. Wright says (page 472) that his father rarely lost bees when he kept them in large box-hives, and "left them to their own sweet will," but when he began to put on boxes and take all the early honey, and compel the bees to live on pollen and poor honey, then they began to die. He also mentions a man who hives his bees in large box-hives, leaves them to "their own sweet will" and loses no bees. Let me ask, where is the profit in such bee-keeping?

Living about 16 miles from here is a bee-keeper who, a few years ago, kept black bees in large box-hives, leaving them undisturbed. He seldom lost bees, and ridiculed Italian bees, movable-comb hives, etc., attributing the loss of bees to these "new-fangled fixin's." Finally, in one of those "disastrous winters" all his bees died "just the same" in spite of their being so nearly free from man's disturbing hand.

Mr. Wright thinks that if the bees have gathered no honey, and need feeding, it may be all right to feed sugar rather than let them die. This is exactly the line of reasoning followed by those who advocate the use of sugar for winter stores, viz: that "it may be all right to feed sugar rather than let them die"—of the diarrhea.

I agree with Mr. Hill in thinking that the difference in price between extracted honey and sugar is so slight that it is doubtful if it would be profitable to extract the honey and substitute sugar, i. e., laying aside the superiority of sugar as a winter food; but when we can so manage that nearly all the honey is stored in the shape of comb honey in sections, the price of which is at least twice that of sugar; and all we have to do is simply to put on a feeder and feed the sugar syrup to the bees, then the difference is not quite so meager. Mr. Hill says that those of whom he wrote would not feed sugar because it would lower the price of honey. Farther along he quotes Mr. Wright as saying that "sugar feeding or bee-keeping has got to go down." Mr. Hill adds: "Nothing will put bee-keeping down so quickly as putting down the price of honey." Whether lowering the price of honey will "put bee-keeping down" depends altogether upon what lowers the price. If it is lowered as the result of an

increase in the number of producers, then bee-keeping, or rather a large number of bee-keepers will go down. It will be the "survival of the fittest." But when the price of honey goes down as the result of using improved hives, fixtures and appliances, and of adopting superior methods of management, then bee-keepers are more prosperous than ever. As the price of a commodity decreases, its consumption increases, and the demand becomes more steady.

Mr. Hill says the using of sugar by bee-keepers has put down the price of honey. Let us suppose, for the sake of argument, that the use of sugar by bee-keepers has lowered the price of honey; has it not also lowered the cost? Did not the extractor lower the price of honey? Has not comb foundation cheapened honey? Has there been a single improvement in bee-keeping that did not cheapen honey?

Mr. Hill says: "Recall the most successful apiarists, then find out how many feed sugar, and draw your own conclusions." Did I not say, in a former article, "The advice to feed sugar for winter stores is not intended for those who are uniformly successful with natural stores?" but what shall those do who are not successful?

Mr. Hill further asks, "Are there not twice as many bees wintered successfully on their natural stores as there are on sugar?" To get at the true inwardness of the matter, he should have asked for the *pro rata* loss of bees wintered on sugar stores, compared with that of those wintered on natural stores.

The only fair objection that can be brought against the use of sugar for the winter stores of bees, is that "it may assist in giving color to an unjust accusation," in the same manner that the use of foundation "may assist in giving color to an unjust accusation." As my opponents failed to notice this point, I will again repeat, "Shall we stop using foundation?"

Rogersville, 6 Mich.

For the American Bee Journal.

Reversed Queens, etc.

REV. M. MAHIN, D. D., (40).

On page 501 of the current volume of the AMERICAN BEE JOURNAL, G. W. Demaree tells of young queens having their heads the wrong way in the cells, and not being able to cut their way out. I have more than once found young queens in that condition, but at the same time I discovered how it happened, and there is no mystery about it at all. When a young queen cuts out of the cell she does not always wait to cut off the whole circumference of its end or point, but leaves on one side as it were a hinge. This allows the lid to close so neatly that one may handle the cell, as I have repeatedly done, without observing that the queen had cut out.

As a further fact to be considered, it should be remembered that there ought to be some of the so-called royal jelly left in the cell when a queen hatches; and in search of this she in many if not in all cases, re-enters the cell. If the end be open she can back out, and no harm will be done; but if the lid of the cell is still hinged to it, and makes a close fit, the bees crawling over it will close it so tightly that the queen will not push it open, and she will perish in her prison. I have found queen-cells from which queens had hatched with the lids waxed fast. Whether it was done by accident or design I cannot say.

It is not at all likely that in any case a queen would be in a reversed position in the cell. She could not spin her cocoon in that position without spinning it at the base of the cell; and, in fact, while spinning it her weight and her motion would so crowd her down into the point of the cell that her normal development would be impossible, and, further, her food would be at the wrong end and separated from her by the web of her cocoon. In view of these facts I do not hesitate to express the opinion that a careful examination of the cells, in the case of Mr. Demaree's reversed queens, would have revealed the fact that they had been opened, and that the queens had re-entered them. I hope that if he shall find another case of the kind he will carefully examine the point of the cell.

THE SEASON OF 1886.

In this part of Indiana the season has been very dry; and yet there has been a fair yield of white clover honey. The yield has been very much better than I would have supposed, in view of the small amount of rain. Basswood was an entire failure; only a few of the trees bloomed, and the few that did bloom yielded little or no honey. All of my bees except one colony are still at New Castle, Ind. I have no place here where I can keep them; and so when I want to see how they are doing I must take a railroad trip of 60 miles. At New Castle there has been much more rain than here, and if I could have given my apiary proper attention I would have had a fair yield of white clover honey. But though basswood trees abound within reach of my bees, there is not the slightest trace of the peculiar aroma of basswood in the honey.

I miss my bees very much, as I take great pleasure in manipulating and observing them. My one colony in this place is six blocks from the parsonage, and is not visited very often.

Bluffton, 6 Ind., Aug. 12, 1886.

When Marketing Extracted Honey, it is a sad blunder to use barrels holding from 300 to 500 pounds—they are too large to be desirable for the trade, too bulky to be handled with care in transportation, and too dear to be lucrative to the producer, for honey put up in such large barrels is subject to a discount of one cent per pound, because of the difficulty in disposing of it without repacking and dividing into smaller lots.

Local Convention Directory.

1886. *Time and place of Meeting.*
- Aug. 18, 19.—Cedar Valley, at Waterloo, Iowa.
H. E. Hubbard, Sec., Laporte City, Iowa.
- Aug. 31.—Stark County, at Canton, O.
Mark Thomson, Sec., Canton, O.
- Sept. 4.—Sheboygan Co., at Sheboygan Falls, Wis.
Mattie B. Thomas, Sec., Sheboygan Falls, Wis.
- Sept. 6.—N. W. Ills. & S. W. Wis., at Dakota, Wis.
Jonathan Stewart, Sec., Rock City, Ills.
- Sept. 7.—Iowa State, at Des Moines, Iowa.
A. J. Norris, Sec., Cedar Falls, Iowa.
- Oct. 7.—Wis. Lake Shore Center, at Kiel, Wis.
Ferd Zastrow, Sec., Millhome, Wis.
- Oct. 12-14.—North American, at Indianapolis, Ind.
F. L. Dougherty, Sec., Indianapolis, Ind.
- Oct. 19, 20.—Illinois Central, at Mt. Sterling, Ills.
J. M. Hambaugh, Sec., Spring, Ills.
- Dec. 1, 2.—Michigan State, at Ypsilanti, Mich.
H. D. Cutting, Sec., Clinton, Mich.

In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Bee-Keeping in Minnesota.—J. W. Powell & Son, Mankato, ♀ Minn., on Aug. 4, 1886, writes:

The weather has been generally dry here this season, still we have had local rains covering a small tract of country in our immediate vicinity. I think this county (Blue Earth) will have the best crops of any in the State. We will have an average yield of honey this season. We have taken about 4,500 pounds of extracted, and have about 4,000 pounds of comb honey ready to take from the hives. We began in the spring with 140 colonies in Simplicity hives, and have increased them to 240, by natural swarming. The prospect is good for a fall yield of honey. Why do not more bee-keepers join the Union? Is it because men always neglect their bees and their preacher when they are short of money?

Hive with Transverse Passages.—J. H. Andre, Lockwood, ♀ N. Y., on Aug. 5, 1886, writes:

Bees are beginning to bring in honey from the early buckwheat. If we do not get early frosts hard enough to kill fall flowers, there will be a good chance for the bees to build up in numbers, if not in stores, and those that have plenty of good stores will be apt to winter well. I gave a description of the hive I use, on page 361, and I find there is not room enough to work the frames so wide; they should be $7\frac{1}{4}$ inches wide outside measure, and instead of cutting the frame-rests in the side of the hive, nail on a strip $\frac{3}{8}$ of an inch square where the frames come, end-wise to the side of the hive. This will admit of a shorter end-bar being used (5-16 of an inch), which is needed in changing the frames inside ends to outside of the hive. Each end-bar must be short, or the inside end will

strike the side of the frame hung in the other space and prevent its being placed close to the cross, which must be done in order to keep the bees from building comb under the cross. After the strips for the frame-rest are securely nailed on where each frame rests, a piece may be sawed out between each frame to give a free passage for the bees at the end of the frames. I shall put in 24 frames in each hive next season, for that will give more room for brood, and the way the frames are arranged will admit of their being spaced closer the year around than any other hive.

Acorn Honey.—C. Theilmann, Theilmanton, ♀ Minn., on Aug. 4, 1886, writes:

My bees have done fairly so far, though white clover has not yielded very well on account of cold, windy weather nearly all through June. Basswood was almost a failure on account of the frost we had on May 4, when the buds made their appearance. My bees have stored about 3,000 pounds of honey from the acorns which were pierced by an insect, thus causing honey to run out.

Prevention of After-Swarms, etc.—David L. Howe, Woodstock, ♀ Vt., asks the following questions:

1. What is the Heddon method of preventing after-swarms? 2. Will honey be augmented by covering the section-boxes in the hive with a mat or something of the kind during the honey-flow? 3. Should the brood-nest be covered with enameled cloth or a mat or some substance that will give ventilation when prepared for winter?

[1. A comprehensive answer to this question is too long for this department, and can be found in the BEE JOURNAL for 1883, page 126, or in *Gleanings* for 1885, page 414, or in Prof. Cook's book, or in mine.

2. No. Use a board cover in summer.

3. Some say "yes" and others say "no," and each class winter their bees and lose them with diarrhea when adopting each plan. I have succeeded and failed both ways.—JAMES HEDDON.]

Honey-Dew Observations.—Wm. Willis, Pomona, ♀ Kans., on Aug. 9, 1886, writes:

I have been an observer of the vexed question of honey-dew for nearly 40 years. If there is no dew, there will be no honey-dew or nectar in flowers. That is the rule here, and honey-dew is not confined to oak or any other kind of tree or plant. In a State or Territory where the most honey-dew is found, the most honey is produced. California is the greatest honey-producing State of the Union, and in parts of California, and

near Honey Lake, Utah, the honey-dew hangs in great drops on the sage-bush in such quantities that the wings of the sage-hens become so loaded that they cannot fly. There are no oak trees there, and not many bugs either. Now all agree that bees do not make honey, but gather it, and I think it equally reasonable that plant-lice do not make honey, but subsist on it. If plant-lice do make honey, what do they make it out of? If they make it out of a green acorn they can excel the honey-bee and all the professional chemists combined. It is not improbable that bugs of any sort may gorge their stomachs on honey-dew until it will pass undigested; hence the "bug-juice" so much talked of to the great injury of our honey market.

Paper Comb Foundation.—Chas. F. Henning, Citra, ♀ Fla., on Aug. 4, 1886, says:

So far my bees have done very well. I have taken a little over 207 pounds on an average, per hive, and all are full again. Wax for foundation has been very scarce with me, and I have tried many experiments of which I will speak some other time, but the following in particular I am well pleased with: I take strong but very thin paper, cut it the proper size for brood-frames, dip it into wax twice, run it through the mill, and I have very fine foundation for brood-frames, and foundation that my bees never go by. It is stronger, never sags, and does not take more wax than thin foundation for surplus. I will report later.

Partridge Pea, Reversing Combs, etc.—T. M. Coleman, Glendon, ♀ Iowa, on Aug. 5, 1886, writes:

I send a plant that grows very plentifully here, and the bees work on it a great deal, but it looks to me as if there could be but little for them in it. I would like to know what it is, and whether it is a good honey-plant. Our bees have done better than I ever knew them to do in May and June, but they have done very little since. I tried reversing a hive by nailing strips of lath across the top of the frames and turning it over just before putting sections on. It was a strong colony, and the frames were full of brood and honey during basswood bloom, yet they did but very little in the sections for about a week. There were brace-combs, and every space filled with honey, crowding the tops of the frames very closely. When turned over, the bees cut these thickened combs away and put it in the sections, and the result is very dark, unsalable honey in the sections; while all the rest is so very white and good. I have concluded that I do not want to reverse frames any more. But I am using over a dozen hives with frames 6 inches deep, outside measure, otherwise Langstroth size, that three seasons of close watching convinces me are better in many respects than any deeper

hive. Thanks to Mr. Dadant for his advice to paint cloths for covers for sections; they are just what I wanted. I use yellow ochre and linseed oil on any coarse cloth, coffee sacking, etc. I am decidedly opposed to bevels and rabbets for two-story hives. I think a square joint much the best, and prefer loose top and bottom boards.

[The plant is partridge pea (*Cassia chamaecrista*), and furnishes nectar in abundance. The flowers are very attractive to honey-loving insects, and are visited by such in great numbers. At the base of each compound leaf there is a curiously-stalked, button-shaped gland, which also excretes a sweet fluid, and which attracts the bees.—ED.]

The Trials of Bee-Keeping.—W. Stearns, Lima, Iowa, on July 27, 1886, writes:

We have had a very good flow of honey from both white clover and basswood, and now from the so-called honey-dew. I am very much of the opinion of J. H. Andre, as stated in his article on page 453, that there is a great deal of hard and hot work about bee-keeping, if one is to be successful. Although I have managed to sell all of my honey up to date, the outlook now is not very encouraging. Honey is a drug in the market, and is sold at ruinous prices. I am fully convinced that honey will never become a staple article of consumption, as very many cannot eat honey, and others do not like it. I have had both rheumatic and malarial fevers, and though I did not at the time attribute my sickness to being stung often, and thus poisoning my blood, yet I am somewhat of that opinion at present.

Building Drone-Comb — Hiving Swarms.—Chas. Mitchell, of Moleworth, Ont., writes:

I cannot tell how I made such a statement as Mr. Hutchinson alludes to on page 437; if correctly printed it is too sweeping. What does any one suppose I do with my supers in use before the bees swarm? I am not so far behind the times as to let my bees lose time building drone-comb in 6 empty frames, and my supers in the house for a week. Many of my first swarms had to get two comb honey supers to let them inside at the time of swarming. Next came the trouble of swarming out from such pent up colonies. I had more trouble with swarming out than I have had in 6 years, until I gave them more room below, when all went well. Those are the colonies I meant, that got no supers until they needed them. I had several colonies finish 120 pounds of comb honey which came off before July 10, and every drop was clover honey. That does not look like idle supers. How many colonies had Mr. H. that equalled this, in either the reversible hive or the other? I certainly know that Mr. Hutchinson is

not stingy with his bees, if he thinks he will get it back, as I think he has changed his hives twice in about 3 years, which means expense. I cannot conceive how his system destroys all wish and instinct of the bees to build any more drone comb. However, I will try it once more, and will be very ready to give the author full credit. In six years of close observation, only once have the bees, that hatched after the first swarm, been of any use to me. We have had two very dry seasons; honey failed altogether about July 10. I have many colonies that were given foundation, that have about honey enough to winter on, and those that had to build their combs are starving. This has happened for 3 years. It is pretty hard to have to turn round and buy sugar for 100 colonies run on 6 frames all summer; this thing is fast putting down the price of honey, and making millionnaires of our sugar merchants.

Honey-Dew for Winter Stores.—

P. Lattner, Worthington, Iowa, on Aug. 6, 1886, writes:

Bees have done well here. I started with 50 colonies, extracted 11,500 pounds of good white clover honey, and have 100 pounds of comb honey. On July 17 the bees brought in honey-dew which spoiled the balance in the hives. The hives are now full of that kind of stuff. Will it do to winter bees on? It is so dry now that I fear we will have no fall crop, unless rains should come soon. The stuff gathered is of a dark green color, very thick and sticky, and tastes as though oak leaves had been stewed in molasses.

[Those who take the risk of wintering bees on honey-dew, take a very heavy one.—ED.]

Phenol for Foul Brood.—A subscriber in Michigan gives the following experience with it:

I notice on page 491 a request to know if any one has been successful in treating foul brood by the Cheshire method. I will say that I have cured foul brood with phenol, and did not take the pains to follow the treatment as laid down by Mr. Cheshire. In 1884 I received a large number of colonies of bees from the South. Late in September I found that they were affected with foul brood. As it was late in the season nothing was done, and several colonies were lost. The next season it again made its appearance; the stores were extracted at once, and the bees were fed a syrup made of honey and water, which was boiled and skimmed, and about one-fourth tea-spoonful of the absolute phenol added to the syrup, which was 5 quarts. The mixture was then put into the combs, the cells being filled; the brood also being covered and some spilled on the bees. As I had some quite bad, and did not have much faith in curing them, I experimented some with thus feeding the medicated syrup quite strong, but it

did not seem to injure the bees any, and did not kill any as I expected it would. I regard this as a sure cure, as the disease has not made its appearance since the treatment, and the affected colonies did better at once after being thus treated.

Some Honey-Dew, Marketing, etc.

—2—J. H. Larrabee, (16—33), Larrabee's Point, Vt., writes:

I think that I have a case of honey-dew, even in the old "Green Mountain State." An elm-tree situated in the centre of the pasture near the house, I found the other morning to be swarming with bees, and upon obtaining some of the leaves they were found to have small, sticky, shiny and sweet spots on their upper surface, and from 3 to 6 small green aphidæ on the under surface of each leaf. My bees have had an average season, but are doing nothing now but draw from their winter stores. I have a colony which, on June 15, sent out a first swarm, that lost its queen and returned to the old hive. I supposed, of course, that the young queen would come around all right, but upon examining them about July 20, I found them queenless, with no brood or eggs in the hive, showing that they had had no laying queen since swarming. I am unable to find laying-worker signs. I introduced a virgin queen which they would not accept. I have removed three frames replacing them with frames of brood, and will introduce a queen. I wish that some able apicultural writer would give us a good, practical article in the BEE JOURNAL on "Relative market values, city and country." Ignorance and carelessness as to cost of production, etc., are responsible for much of the low prices. We need much more light on markets, not marketing honey.

Convention Notices.

☞ The next meeting of the Stark County Bee-keepers' Society will be held in Grange Hall, at Canton, O., on Aug. 31, 1886. M. THOMSON, Sec.

☞ The N. W. Ills. & S. W. Wis. Bee-keepers' Association will hold its next meeting at the residence of F. D. McKibben, 1½ miles east of Dakota, on the Milwaukee & St. Paul R. R., on Sept. 6, 1886. JONATHAN STEWART, Sec.

☞ The Cedar Valley Bee-keepers' Association will hold its annual meeting at the office of Jerry Mosher, East Side Waterloo, Iowa, on Aug. 18 and 19, 1886. An exceedingly good programme has been arranged. All interested in apiculture are most cordially invited to attend. H. E. HUBBARD, Sec.

☞ The 4th annual basket picnic of the Eastern Iowa and Western Illinois Bee-keepers' Association will be held at Schuetzen Park, Iowa, on Thursday, Aug. 26, 1886. All interested in bee-culture are earnestly requested to be present and make this the grandest picnic in the history of the organization.—L. V. McCaughey, Wm. Gronroff, and Wm. Goos, Committee of Arrangements, Davenport, Iowa.

☞ The Iowa State Bee-keepers' Association will meet on the Fair Grounds in Des Moines, on Tuesday, Sept. 7, 1886, at 2 p.m., continuing in session during that and the following two or three days. A large and substantial tent has been secured and is now at hand for the use of the society. Any or all of the 6,000 bee-keepers of Iowa are urgently requested to be present and help make the meeting a pleasant and profitable one. A. J. NORRIS, Sec.

O. O. POPPLETON, Pres.



Issued every Wednesday by
THOMAS G. NEWMAN & SON,
PROPRIETORS.

923 & 925 WEST MADISON ST., CHICAGO, ILL.
At One Dollar a Year.

ALFRED H. NEWMAN,
BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for \$1.50.

A New Crate to hold one dozen one-pound sections of honey.—It has a strip of glass on each side, to allow the honey to be seen. It is a light and attractive package. As it holds



but one tier of sections, no damage from the drippings from an upper tier can occur. We can furnish the material, ready to nail, for 9 cts. per crate. Glass 1½c. per light, extra.

Bees for Sale.—We offer to sell a few strong colonies of Italian bees, in ten-frame Simplicity hives, at \$6.00 each.

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have just gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Italian Queens.—We have a few untested queens which we can send by return mail. Three for \$2.75; six for \$5.00; twelve for \$9.00. For Tested, double the prices.

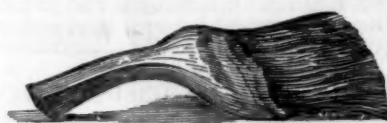
System and Success.

All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. The prices are reduced, as follows:

For 50 colonies (120 pages).....\$1 00
" 100 colonies (220 pages)..... 1 25
" 200 colonies (420 pages)..... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructible.



When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us four subscriptions—with \$4.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

The Western World Guide and Hand-Book of Useful Information, contains the greatest amount of useful information ever put together in such a cheap form. The printing, paper, and binding are excellent, and the book is well worth a dollar. To any one sending us two new subscribers besides their own, with \$3, for one year, we will present a copy of this valuable book.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

Honey and Beeswax Market.

Office of the AMERICAN BEE JOURNAL,
Monday, 7 a. m., Aug. 16, 1886.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY.—Prices are nominal. Offers of 13c. would be accepted; yet 14c. is being asked.
BEESWAX.—Scarce at 25c.
R. A. BURNETT, 161 South Water St.

NEW YORK.

HONEY.—The present quotations are as follows: Fancy white comb in 1-lb. sections, 12c.; fancy white comb in 2-lb. sections, 8c.; buckwheat in 1 and 2-lb. sections, 5c.; extracted white clover, 6c.; extracted, California, 4½c.; extracted, Southern, per gallon, 45 to 55c.
BEESWAX.—23 to 28c.
MCCAUL & HILDRETH BROS., 34 Hudson St.

BOSTON.

HONEY.—One-lb. sections, white clover, 12½c.; 2-pound sections, 11½c. Extracted, 8c.
BEESWAX.—25 cts. per lb.
BLAKE & RIPLEY, 57 Chatham Street.

DETROIT.

HONEY.—The market is little dull, fruit interfering with the demand. Best comb honey in 1-lb. sections, 13c.
BEESWAX.—Firm at 23c. for fair quality.
M. H. HUNT, Bell Branch, Mich.

CINCINNATI.

HONEY.—Demand is slow for all kinds and shapes of honey. Prices of extracted honey range between 3½c. to 7c., according to quality; and choice comb honey brings 14½c. in a jobbing way.
BEESWAX.—Demand is good and arrivals fair. We pay 20c. for good yellow.
C. F. MUTH & SON, Freeman & Central Ave.

CLEVELAND.

HONEY.—The demand for honey is not very lively at present, but prices are steady. Choice new honey in 1-lb. sections is selling at 14c.; 2-lb. 12½c. Old honey is very dull at 10½c. Extracted, 6c. to 7c.
BEESWAX.—25c.
A. C. KENDEL, 115 Ontario Street.

KANSAS CITY.

HONEY.—The receipts of new comb honey are fair, with a good demand, and light stock in the city. Extracted is in light demand. We quote: ½-lb. sections, 16c.; white clover, 1-lb. 13½c.; dark, 1-lb., 10½c.; white clover, 2-lbs., 11½c.; dark, 2-lbs., 9½c.; white sage California, 2-lbs., 10½c.; dark, 2-lbs., 8c.; extracted white clover, 5c.; dark, 3c. to 4c.; white sage California, 4c. to 5c.; dark, 3c. to 4c.
BEESWAX.—20c. to 22c.
CLEMONS, CLOON & CO., cor. 4th & Walnut.

MILWAUKEE.

HONEY.—The market is fairly supplied with honey, trade is dull, prices depressed, and the outlook is for a large production. Already some are peddling about the city by the producers themselves, demoralizing the prices, which should not be done. We quote: Choice white in 1-pound sections, 14c. to 15c.; 2-lbs. 13c. to 15c. Dark honey not wanted. Extracted, white, in barrels and kegs, 7c.; in tin cans, 6c. to 7c.; dark in barrels or kegs, 4c. to 5c.
BEESWAX.—25c.
A. V. BISHOP, 142 W. Water St.

SAN FRANCISCO.

HONEY.—Arrivals of honey have been small in the last week, as the prices are so low that producers or owners cannot afford to sell without a loss to them, and they prefer, therefore, to store their honey either here or in the country for better prices. The crop has been represented much larger than it really is; and prices are improving a little, or are at least a little firmer. Some large sales at 3½c. to 4c. for choicest quality for export have been made. We quote 3½c. to 4c. for the latter for choicest quality in a jobbing way. Supplies are very small, but soon they may increase, and quality promises to be choice.
BEESWAX.—According to quality, 20c. to 25c.
SCHACHT & LEMCKE, 122-124 Davis St.

HONEY.—Prices are so low that honey-producers are holding back their product; still the market is well supplied. We quote: Comb, extra white, 8c. to 10c.; off grades, 6½c. to 7c.; extracted, white, 4c. to 4½c.; amber, 3½c. to 3¾c.; dark, 3c. to 3½c.
BEESWAX.—22½c. to 23c.
O. B. SMITH & CO., 423 Front Street.

ST. LOUIS.

HONEY.—Choice comb, 10c. to 12½c.; latter price is for choice white clover. Strained, in barrels, 3½c. to 4c. Extra fancy of bright color and in No. 1 packages, ¼ advance on above prices. Extracted white, 4c. to 5c.; in cans, 6c. to 7c.
BEESWAX.—Firm at 22c. for prime.
D. G. TUTT & CO., Commercial St.

Home Market for Honey.

To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a demand for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, \$2.50. Five hundred will be sent postpaid for \$10.00; or 1,000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell almost any quantity of it.

Frank Leslie's Sunday Magazine for September opens with a second installment of Mr. Powell's interesting "Leaves from My Life," with portraits of Robert Southey, Wm. Wordsworth, B. T. Coleridge, Leigh Hunt and Miss Landon. A very interesting article is, "Why do Church-bells Annoy?" by B. Austen Pearce, Mus. Doc. Oxon, which is illustrated by no less than 14 cuts. This is appropriately followed by Bulwer's translation of Schiller's "The Lay of the Bell," with three illustrations. There are numerous articles, poems and midsummer illustrations, making up a bright and interesting number of this favorite family magazine.

We are in receipt of a large and very carefully executed engraving of the new Standard Oil Company Building, 26 Broadway, New York, which is noteworthy as the finest business structure on the greatest commercial thoroughfare of this continent. The enormous granite pile, 200 feet deep, and almost 200 feet in height from foundation stone to pinnacle, is entirely given up to the executive offices of the Company, which is entitled to credit for having added so imposing and enduring an example to the great commercial monuments of the Metropolis.

The St. Joseph, Mo., Inter-State Bee-Keepers' Association will hold its annual meeting on Wednesday evening of the Exposition week, September 30, 1886. Arrangements are being made to have an interesting meeting. The place of holding the meeting will be published in our local papers on Tuesday and Wednesday a.m.

E. T. ABBOTT, Sec.

The Illinois Central Bee-Keepers' Association will hold its next meeting at Mt. Sterling, Ill., on Tuesday and Wednesday, Oct. 19-20, 1886. J. M. HAMBAUGH, Sec.

The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Mich., on Dec. 1 and 2, 1886.

H. D. CUTTING, Sec.

Advertisements.

Will sell 400 full Colonies of Bees in lots to suit buyer; or will sell Apiarists already stocked up. Now is your time. Address, H. R. BOARDMAN, 28Atf EA. TOWNSEND, Huron Co., O.

ATTENTION, BEE-KEEPERS!!

Now is the time to Italianize Cheap. Having all my orders filled to date, will sell Fine Queens from my well-known Strains, at the following very low rates: 1 Queen, 80 cts.; 6 Queens, \$4.50; 12 Queens, \$8.00; 1 Tested Queen, \$1.50; 6 Tested, \$8; 1 Select Tested Queen, \$2.00. Safe arrival of all Queens guaranteed, and Queens sent by return mail. Address, Wm. W. CARY, 32Atf COLERAINE, MASS.

HOW to WINTER BEES.

THE October number of the American Apiculturist will contain essays on "Wintering Bees," from the pens of James Heddon, G. M. Doolittle, A. E. Manum, Prof. Cook, Dr. Tinker, J. E. Pond, Ira Barber, J. H. Martin, and other equally prominent apiarists. Every bee-keeper should secure a copy. For ten cents in stamps this number will be mailed to any address on September 25. No specimen copies of this number will be sent out.

Regular subscription price \$1.00 per year. Single copies 10 cts. each. Copies of back numbers will be sent free. Address,

AMERICAN APICULTURIST, 33A1t WENHAM, MASS.



HUMPREYS' HOMEOPATHIC SPECIFIC No. 28

In use 30 years. The only successful remedy for Nervous Debility, Vital Weakness, and Prostration, from over-work or other causes. \$1 per vial, or 6 vials and large vital powder, for \$5. SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Hampreys' Medicine Co., 109 Fulton St., N. Y.

I CAN use a few thousand pounds of H. R. BOARDMAN, 28Atf EA. TOWNSEND, Huron Co., O.

BEE Hives and Sections—Send to HERR & BEULE, manufacturers, Beaver Dam, Wis., for price lists. Good materials. Low prices. 10A26t

TESTED QUEENS. (Imported Mother). \$1.25 each; \$12 per doz.—O. N. Baldwin, Clarksville, Mo. 4A1y

ROOT'S SIMPLICITY and CHAFF HIVES. Dadant's Celebrated Comb Foundation, Frames, Sections, Smokers, and a full line of Supplies constantly on hand. Shipping-Crates, all sizes, single and double tier. E. R. NEWCOMB, PLEASANT VALLEY, Dutchess Co., N. Y. 27A8t

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

Golden Italians.

WARRANTED QUEENS 75 cts. each; per dozen, \$8.00. All Queens sent out prior to Aug. 10 will be reared from cells built by natural swarming. Queens shipped next day after receiving order, if so desired. Should any prove to have mislabeled, they will be replaced with a nice Tested Queen of 1886 rearing. Address,

JAMES WOOD, North Prescott, Mass. 20A20t

FLAT-BOTTOM COMB FOUNDATION.

high side-walls, 4 to 16 square feet to the pound. Circular and samples free J. VAN DEUSEN & SONS, Sole Manufacturers, Sprout Brook, Mont. Co., N. Y.

BEESWAX.

We pay 20c. per lb., delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

THOS. G. NEWMAN & SON, 623 & 925 West Madison Street, CHICAGO, ILL.

THE AMERICAN APICULTURIST

SENT one year, and a Tested Italian Queen, to each subscriber—all for \$1.50. Sample copies free. Address,

30Atf HENRY ALLEY, Wenham, Mass.

Vandervort Comb Fdn. Mills,

Send for Samples & Reduced Price-List. Atf J. VANDERVORT, Laceyville, Pa.

LOOK HERE!

Italian Queens by Return Mail.

Tested, \$1.00; Untested, 75 cts.

W. G. HAYEN, 33A1t PLEASANT MOUND, ILL.

FREE! New Book of Fancy Works with 100 illustrations, 150 New Stitches, 10 Special Offers. 200 Picture Bulletin 48-col. story-paper, all for 4c postage National Bazar, 7 W Broadway, N. Y. 33A13t

STRONG Nuclei—with Tested Italian Queens and full-sized frames. 2 3-frame Nuclei, \$5.00; 10 3-frame Nuclei, \$23; 2 4-frame, \$6; 10 4-frame, \$25.00. Also Full Colonies cheap. Address,

31D2t REV. J. E. KEARNS, Morning Sun, Iowa.

Send 75 Cents for my New Book—"A Year among the Bees;" 114 pages, cloth bound. Address,

20Atf DR. C. C. MILLER, MARENGO, ILLS.

Alley's Queens by Return Mail.

Warranted, \$1; Select, \$1.25; Tested, \$1.50

TESTIMONIALS:

Monticello, Wis., Aug. 8, 1886.—The Queens I got of you last season are splendid,—the best in my yard.—F. J. Breyling.

Lafayette, Ind., Aug. 8, 1886.—Please send me 2 Queens. I want your stock, as it is the best I have ever had.—James L. Cohee.

Somerset, O., July 23, 1886.—I have an Italian Queen (crossed with a -ryan drone) that I got of you 2 years ago, that produces my best honey-gatherers, and very gentle too.—R. B. Woodward.

Address, H. ALLEY, Wenham, Mass. 33A1t

Metal Reversible Frame Corners.

ACKNOWLEDGED by all to be the best. Can be made to fit any frame if exact width of frame is given when ordered. Strong and simple to adjust.



Sample Corners, for 1 frame 5 cts.; for 10, 35 cts.; for 25, 75 cts. All Corners made 1/4-inch unless otherwise ordered. F. M. JOHNSON, WASHINGTON DEPOT, Litchfield Co., CONN. 32A1t

HONEY and BEES for SALE.

5,000 POUNDS OF HONEY, White Clover and Basswood, in 1-pound Sections. Also, 100 COLONIES of Bees in good hives; good straight combs, strong with bees and heavy with honey—at \$6.00 per Colony. WILLIAM BLAKE, 32A3t BUCHANAN, Berrien Co., MICH.

WANTED!

500,000 Names.

EVERY Poultry, Bee or Pot Stock Breeder subscribing for "THE POULTER" during the next 90 days—and sending us a list of not less than twenty-five (25) bona fide names and addresses of persons who are or may be interested in POULTRY (so that we may send them Sample Copies)—will have his or her name inserted in our "Breeder's Directory," FREE OF CHARGE.

To the Breeder sending the largest list of names will be presented a one inch advertisement in "THE POULTER," for Six Months; to the second largest list, for Four Months; to the third largest list, for Two Months; and to the fourth largest list, for One Month, free of charge.

This gives every breeder (who subscribes) a Free "ad" in our Breeder's Column. "THE POULTER" one year and a chance for a one inch "ad" free—ALL FOR 50 CENTS.

Address, THE POULTER, 32A3t MT. VERNON, OHIO.

Dadant's Foundation Factory, wholesale and retail. See Advertisement in another column.

FOR pressing foundation into wire frames—15 cents; by mail, 20 cts.

GUMMED HONEY LABELS.
OF these we have 20 styles, and when ordered in quantities of 250, 500 or 1,000, we print the name and address of the apiarist. Prices range from 25 cents for 250, and upwards. Samples sent upon application.

Little Detective Scales, weigh 25 lb. \$2.50
Honey Gates for Extractors, 75c.
Gearing for Honey Extractors, \$1.50.
Handles for Honey Gates, 25c; mail 40c
Novice's Metal Corners, per 100, 50c.
Wire Cloth, painted, 14 mesh, 8c. sq. ft.
 " " " timed, for Qu. cages, 12c.
 " " " for extractors, 15c.
Glass, 5x6 in., 240 lights in a box, \$2.50.
Glass for shipping crates, per 100 lights
 2x13 1/2, for one-D. sections, \$2.50.
 3x16 1/2, for two-D. sections, \$3.50
Whitman's Fountain Pump, \$8.
Wire (for fdn.) oz. spools, 4c.; mail 6c
 1 lb. spools, 40c.; mail 58c
Novice's Iron Blocks, for making his
 metal-corner frames, 15c; mail 25c
Queen Registering Cards, 10c. per doz.
Scissors, for cutting queen's wing, 50c
Ribbon Badges, 10c.; 100 for \$8.00.
 " " " rosette and gold lace, 50c.
Rubber Sprinkler, \$1.00; by mail, \$1.10
Parker's Foundation Fastener, 25 cts.
 by mail, 40 cents.
Bee Veil (common), by mail, 50 cents.
Metal Rabbits, per foot, 1 1/2c.
Registering Scales, 50 for \$150;—100 for
 \$2.50. Sample, by mail, 10c.
Felt Blankets, 35c. per lb. by express.